BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

DIVISION: BYATARAYANAPURA

SUB DIVISION: KODIGEHALLI

Name of Work: *Modified Estimate for Improvements to Roads, Drains and Constructions of Culverts at Hoodi Layout and Surrounding areas in Ward No. 09, Amruthahalli.*

Job Code: 009-23-000012

Estimated Cost:	***Rs. 55,00,000.00***
Approved Amount:	***Rs. 40,08,086.67***
Modified Amount:	***Rs. 40,07,413.00***

BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

NAME OF WORK:- Modified Estimate for Improvements to Roads, Drains and Constructions of Culverts at Hoodi Layout and Surrounding areas in Ward No. 09, Amruthahalli.

Modified Estimate Cost.Rs = 4007413.00

Sl No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
1	Earth work Excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)	Cum							
	New Drain								
	Hoodi Layout 5th Cross		1	73.00	1.00	0.90	65.70		
			1	25.70	1.00	0.90	23.13		
			1	5.00	1.00	0.90	4.50		
	Hoodi Layout 1st Cross		2	62.00	1.00	0.90	111.60		
	Culvert								
			1	5.00	1.50	0.90	6.75		
	Total						**211.68**	175.96	**37247.00**
2	Providing and laying in position Plain Cement Concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)	Cum							
	New Drain								
	Hoodi Layout 5th Cross		1	73.00	1.00	0.15	10.95		
			1	25.70	1.00	0.15	3.85		
			1	5.00	1.00	0.15	0.75		
	Hoodi Layout 1st Cross		2	62.00	1.00	0.15	18.60		
	Drain Vent Concrete								
	Hoodi Layout 5th Cross		2	60.00	0.60	0.10	7.20		
	Culvert								
			1	5.00	1.50	0.15	1.12		
	Total						**42.47**	5254.08	**223141.00**

Sl No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
3	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol - I Pg 17 item no 2.4.2))	Cum							
	New Drain								
	Raft								
	Hoodi Layout 5th Cross		1	73.00	0.90	0.15	9.85		
			1	25.70	0.90	0.15	3.46		
			1	5.00	0.90	0.15	0.67		
	Hoodi Layout 1st Cross		2	62.00	0.90	0.15	16.74		
			2	60.00	0.60	0.10	7.20		
	Side Wall								
	Hoodi Layout 5th Cross		2	73.00	0.15	0.60	13.14		
			2	25.70	0.15	0.60	4.63		
			2	5.00	0.15	0.60	0.90		
	Hoodi Layout 1st Cross		2x2	62.00	0.15	0.60	22.32		
	Hoodi Layout 5th Cross		2x2	60.00	0.15	0.30	10.80		
	Culvert								
	Raft		1	5.00	1.30	0.20	1.30		
	Side Wall		2x1	5.00	0.30	0.60	1.80		
	Total						**92.81**	5928.01	**550155.00**
4	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)	Tonne							
	For Drain	Cum					78.91		
		kg	Steel assumed 60Kg / Cum of Concrete				0.06		
		tonne					**4.73**		
	For Culvert	Cum					3.10		
		kg	Steel assumed 80Kg / Cum of Concrete				0.08		
		tonne					**0.25**		
	Total						**4.98**	87192.82	434426.00

Sl No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
5	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. Mix 1:2:4 (M15) (PWD SR 2021-22 Vol - I Pg No. 17 item No. 2.4.1)	Cum							
	Ramp for Culvert								
			2x1	5.00	1.20	0.15	1.80		
	Total						**1.80**	5562.48	**10012.00**
6	Providing and Fixing pre cast Covering Slab made out of CC 1:2:4 with 100 mm thick and Finishing cutting, including form work,curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, copmplete. As per Engineer incharge.	Sqm							
	Covering Slab								
	Hoodi Layout 5th Cross		1	73.00	0.90		65.70		
			1	25.70	0.90		23.13		
			1	5.00	0.90		4.50		
	Missing Covering Slab		1	52.00	0.90		46.80		
			2	62.00	0.90		111.60		
	Total						**251.73**	2009.82	**505932.00**
7	Providing and Fixing pre cast Covering Slab 230 mm thick made out of CC 1:2:4 and jelly 25mm Down size with steel reinforcement including form work,curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc, complete. As per Engineer incharge.	Sqm							
	For Culvert								
	5th Cross Road		1	5.00	1.20		6.00		
	Total						**6.00**	4659.48	**27957.00**

Sl No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
8	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density MORTH Specification No. 406 (PWD SR 21-22 Vol III Pg no. 24 Item No. 4.27 (A))	Cum							
	Profile Correction and Damage Portion								
	New Road Hoodi Layout 5th Cross		2	155.00	1.20	0.25	93.00		
	5th Cross Road		2	73.00	1.20	0.25	43.80		
	Damage Portion		1	60.00	5.60	0.25	84.00		
			2	30.00	1.00	0.25	15.00		
	Total						**235.80**	2264.72	**534021.00**
9	Providing and applying Primer Coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means MORTH Specification No. 502 (PWD SR 21-22 Vol III Pg no. 29 Item No. 5.1 A (i))	Cum							
	Profile Correction								
	New Road Hoodi Layout 5th Cross		2	155.00	1.20		372.00		
	5th Cross Road		2	73.00	1.20		175.20		
	Damage Portion		1	60.00	5.60		336.00		
			2	30.00	1.00		60.00		
	Total						**943.20**	39.73	**37473.00**
10	Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects (PWD SR 21-22 Vol III Pg no 33 Item No 5.12 (C))	Cum							
	Profile Correction and Damage Portion								
	New Road Hoodi Layout 5th Cross		2	155.00	1.20	0.05	18.60		
	5th Cross Road		2	73.00	1.20	0.05	8.76		
	Damage Portion		1	60.00	5.60	0.05	16.80		
			2	30.00	1.00	0.05	3.00		
	Total						**47.16**	8645.49	**407721.00**

No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
11	Providing and applying Tack Coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.25 kg/m2 on the prepared bituminous surface cleaned with mechanical broom MORTH Specification No. 503 (PWD SR 21-22 Vol III Pg no. 29 Item No 5.4 (ii))	Sqm							
	Road Work								
	New Road Hoodi Layout 5th Cross		1	215.00	5.60		1204.00		
	5th Cross Road		1	73.00	5.50		401.50		
			1	140.00	5.00		700.00		
	Total						**2305.50**		
	Qty upto 125%						**1181.25**	13.24	**15640.00**
	Qty Above 125%						**1124.25**	13.24	**14890.00**
	Basic rate	14.00							
	10% AW	1.40							
	Total	**15.40**							
	Tender Premium @ -14.00 %	-2.16							
	Grand Total	**13.24**							
12	Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade,level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects (PWD SR 21-22 Vol III Pg no 36 Item No 5.16 (C))	Cum							
	Road Work								
	New Road Hoodi Layout 5th Cross		1	215.00	5.60	0.04	48.16		
	5th Cross Road		1	73.00	5.50	0.04	16.06		
			1	140.00	5.00	0.04	28.00		
	Total						**92.22**		
	Qty upto 125%						**47.25**	10038.01	**474296.00**
	Qty Above 125%						**44.97**	10291.53	**462810.00**
	Basic rate	10879.00							
	10% AW	1087.90							
	Total	**11966.90**							
	Tender Premium @ -14.00 %	-1675.37							
	Grand Total	**10291.53**							

No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
13	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/ m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes. MORTH Specification No. 803 (PWD SR 21-22 Vol III Pg no 57 Item No 8.15)	Sqm							
	Road Work								
	New Road Hoodi Layout 5th Cross		2	215.00	0.10		43.00		
			2	73.00	0.10		14.60		
			2	140.00	0.10		28.00		
	Total						**85.60**		
	Qty upto 125%						**52.50**	452.19	**23740.00**
	Qty Above 125%						**33.10**	452.19	**14967.00**
	Basic rate	478.00							
	10% AW	47.80							
	Total	**525.80**							
	Tender Premium @ -14.00 %	-73.61							
	Grand Total	**452.19**							
14	Loading and Unloading of Stone Boulder / Stone aggregates / Sand / Kankar / Moorum. (Tipper 14 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1C)	Cum							
	Qty Vide 90% of Item No- (1)						381.81		
	Total						**381.81**	70.00	**26727.00**
15	Cost of Haulage Excluding Loading and Unloading Taking output 18 t load and lead 10 km = 180 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4B)	T.Km							
	Qty frm Item No-14						381.81		
	Density of Sand/Debris i.e 1.28 Tonne/Cum			381.81	1.28		488.72		
	Cost of Haulage Excluding Loading and Unloading on Surface Road to a distance of 9.80 Kms			488.72	9.80		4789.42		
	Total						**4789.42**	10.32	**49427.00**
	EIRL								
E1	Removing and resetting of footpath slab (Approved rate)	Sqm							
	Hoodi Layout 5th Cross		2	215.00	0.90		387.00		
			2	140.00	0.90		252.00		
	Total						**639.00**	202.10	**129142.00**
	Basic Rate	235.00							
	Tender Premium @ -14.00%	-32.90							
	Grand Total	**202.10**							

No	Description of work	Unit	Mesurement				Qty.	Rate	Amount
			No.	L	B	D			
E2	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work ((Vol - I, P.No-8, I No-1.12 of PWD SR 2021-22)	Cum							
	Drain Desilting								
	Hoodi Layout 5th Cross		2	215.00	0.60	0.55	141.90		
			2	140.00	0.60	0.55	92.40		
	Profile Correction and Damage Portion								
	New Road Hoodi Layout 5th Cross		2	155.00	1.20	0.25	93.00		
	5th Cross Road		2	73.00	1.20	0.25	43.80		
	Damage Portion		1	60.00	5.60	0.20	67.20		
			2	30.00	1.00	0.20	12.00		
							450.30	61.49	**27689.00**
	Basic rate	65.00							
	10% AW	6.50							
	Total	**71.50**							
	Tender Premium @ -14.00 %	-10.01							
	Grand Total	**61.49**							
								Total Amount =	**4007413.00**

Rupees Forty Lakh(s) Seven Thousand Four Hundred Thirteen Only

CERTIFICATE:

1) The work spot has been inspected and found to be necessary.
2) The work spot comes under B.B.M.P Limits.
3) The provisions made in the estimate are necessary and minimum.
4) The estimate is based on C.S.R of PWD 2021-22, Issue rates and Data Rates +/- Tender Premium.

Assistant Engineer
Ward No. 09, Amruthahalli

Assistant Executive Engineer
Kodigehalli Sub Division

Executive Engineer
Hebbala Division

Technical Sanction
Accorded For RS 4007413.00
Head of A/C P.37226
CER NO : 77 Dt: 14/03/23